

North Carolina Department of Transportation
Division of Highways
Transportation Mobility and Safety Division

STANDARD PRACTICE
for
Retroreflective Sign Sheeting

This standard practice establishes three grades of retroreflective sheeting. Contract documents establish the performance requirements for each grade and requires that retroreflective sheeting materials be pre-qualified by the Transportation Mobility and Safety Division – Signing and Delineation Unit.

The retroreflective sheeting grades are intended to establish meaningful minimum retroreflectivity intervals with brightness differences that would be detected by most drivers. Materials meeting the requirements for Grade B would also meet the requirements for Grade C, and materials meeting the requirements for Grade A would also meet the requirements for Grades B and C.

The following are standard examples of applications (also summarized in table) for the various grades of retroreflective sheeting:

North Carolina Grade C – Retroreflective sheeting materials meeting Grade C, commonly referred to as “regular grade”, are typically of encapsulated microscopic glass bead lens or unmetallized microprismatic construction. Grade C should typically be used on all regulatory, warning, and guide signs, unless indicated otherwise.

North Carolina Grade B – Retroreflective sheeting materials meeting Grade B, commonly referred to as “intermediate grade”, are typically of unmetallized microprismatic construction. Grade B shall be used for all school zone signs, bicycle and pedestrian crossing signs (fluorescent yellow-green); and highway-rail crossing signs (fluorescent yellow). Grade B shall also be used for all work zone signs (fluorescent orange). Grade B should be used for signs (regulatory, warning, and guide) located in areas with high levels of ambient lighting (urban freeways, downtown districts, etc.).

North Carolina Grade A – Retroreflective sheeting materials meeting Grade A, commonly referred to as “premium grade”, are typically of unmetallized microprismatic construction. Grade A should be used for the legend and border of left-mounted shoulder or overhead-mounted guide signs.

TABLE
Sheeting Usage by Grade

Sign Type	Description	Legend & Border	Background
Regulatory	Typical Shoulder Mount	C	C
Warning		C	C
Guide		C	C
Fluorescent Warning	School Zone	B	B
	Bicycle Crossing	B	B
	Pedestrian Crossing	B	B
	Highway-Rail Crossing	B	B
	Work Zone	B	B
Guide	Overhead Mount	A	C
	Left Shoulder Mount	A	C
Regulatory	High Ambient Lighting Locations (ex., urban freeways)	B	C
Warning		B	C
Guide		B	C

Note: Non-reflective black sheeting or opaque black inks must be used when black is required.